

Vijayakrishna Naganoor

Research Interests	Machine Learning, Speech Processing	
Education	National Institute of Technology Karnataka, Surathkal, INDIA	August 2013 – present
	Bachelor of Technology	
	Major:Electrical and Electronics Engineering	(GPA 8.87/10.0)
	Sri Bhagawan Mahaveer Jain College, Bangalore	May 2011 – May 2013
	Pre-University (PCME)	
	Core Subject: Physics,Chemistry,Mathematics,Electronics	97 Percentage
Awards and Fellowships	<ul style="list-style-type: none">Awarded Mitacs Globalink Scholarship for Summer Research Internship in Canada.Awarded a Summer Research Fellowship by the Indian Academy of Sciences, 2015Recipient of the National Talent Search Examination (NTSE) scholarship, 2009-present; (Awarded to <i>top 750 students among 0.5 million</i> from all over the country)	
Publication	Selfie Detection by Synergy-Constraint Based Convolutional Neural Network	
	Yashas Annadani, Vijayakrishna Naganoor, Akshay Kumar Jagadish,Krishnan Chemmangat	
	12th IEEE International Conference on Signal Imaging Technology and Information Systems (SITIS), 2016.[pdf][code]	
	Word Boundary Estimation for Continuous Speech Using Higher Order Statistical Features	
	Vijayakrishna Naganoor, Akshay Kumar Jagadish, Krishnan Chemmangat	
	IEEE TENCON 2016 — Technologies for Smart Nation [pdf]	
Research Experience	Bachelor thesis	Advisor: Dr.Prasanta Kumar Ghosh
	SPIRE Lab,Indian Institute of Science	August 2016 – present
	<i>Analysis of Indian Spoken Language pronunciation using suprasegmental features such as Rhythm and Prosody</i>	
	<ul style="list-style-type: none">Developing methods for automatic prosodic event detection for Indian EnglishAnalysing the effect of native language on English by studying the rhythmic variability among the different Indian languages	
	Research Intern	Advisor: Dr.Robert Laganieri
	VIVA Lab,University of Ottawa	May 2016 – August 2016
	<i>Object detection system to be used in driver assistance and smart video surveillance applications</i>	
	<ul style="list-style-type: none">Worked on Leading Car Detection using Convolutional Neural Networks on the popular vehicular database - TME Motorway DatasetAttempted to analyse small and big convnets,their architectural choices,parameters and the pre-training on the surrogate tasks.	
	Summer Research Intern (IAS)	May 2015 - July 2015
	Vision and Speech Lab,IIIT Hyderabad	
	NIST I-vector Language Identification challenge.	
	<ul style="list-style-type: none">Involved development of new methods for using i-vectors for language identification in the context of conversational telephone speechAttempted to classify 65 different languages by directly using the given i-vectors from the audio samples.	

Projects	Speaker Count Estimation using Deep Learning Methods (Workig Paper) [pdf] <i>Gururaj Krishnamurthy, Vijayakrishna Naganoor, Dr.Deepu Vijayaseenan</i> Submitted to IEEE International Conference on Multimedia and Expo, 2017 <ul style="list-style-type: none"> Addressed the problem of challenging task of counting the number of speakers present in a given conversation which can be helpful for is help in improving speaker diarization and in audio forensics. We are exploring this task using features generated from DCNNs and CRBMs to compare their effectiveness over conventional features like MFCCs. 			
	Music Genre Classification <i>Vijayakrishna Naganoor, K.B.Rahul, Dr.Deepu Vijayaseenan</i> <ul style="list-style-type: none"> Attempted for classifying the songs not only into the right Genres but also its subgenre using Hierarchical classification. We have also explored the usage of Deep Convolutional Neural Networks in large scale genre classification. The motivation stems from the unprecedented success of these methods in the field of computer vision for object classification 			
	Low-cost Hearing Aid Design <i>Part of Music and Audio Research Group</i> [MARG] , NITK <ul style="list-style-type: none"> This project aims at designing and developing a low-cost hearing aid device that is suitable for use in Indian Conditions. This project is being developed in collaboration with Department of Speech and Hearing, Kasturba Medical College, Manipal. The project has been awarded funds from IEEE SIGHT which promotes development of humanitarian technology. 			
Coursework and Skills	Related Coursework <ul style="list-style-type: none"> Pattern Recognition and Machine Learning, Signals and Systems,Digital Signal Processing, Advanced Digital Signal Processing, Mathematics courses like Linear Algebra, Probability Theory, Single and Multi-variable Calculus Programming Skills C/C++, Python and Bash Technical Skills Matlab, OpenCV, Caffe, Tensorfloe and Latex.			
Other Notable Achievements	<ul style="list-style-type: none"> Selected as Signal Processing Society Chairmain,IEEE-NITK Student Chapter Offered Summer Research internship at MUTISPEECH TEAM, Inria,France (Declined) Qualified the Karnataka Regional Mathematical Olympiad (hosted by the National Board for Higher Mathematics), the first stage of selection to the Indian Mathematics Team, 2012 			
Extra Curricular Activities	<ul style="list-style-type: none"> Completeled Junior Grade in <i>Carnatic Classical Music</i> (2011) District level Swimmer(Representing Bangalore South at the District level competition (2010)) Represented Karnataka at the National Level Painting Competition on Energy Conservation (Organised by the Ministry of Power, Goverment of India) 			
Contact Information	National Institute of Technology Karnataka Boys Hostel ,Room C-410, P.O.Srinivasnagar Surathkal, Mangalore-57025		Email : scivijay95@gmail.com Home : vknaganoor.github.io	
References	Dr.Robert Laganiere Professor University of Ottawa	Dr.Prasanta Kumar Ghosh Assistant Professor Indian Institute of Science	Dr.Deepu Vijayasenana Assistant Professor NITK, Surathkal	Dr.Krishnan CMC Assistan Professor NITK, Surathkal